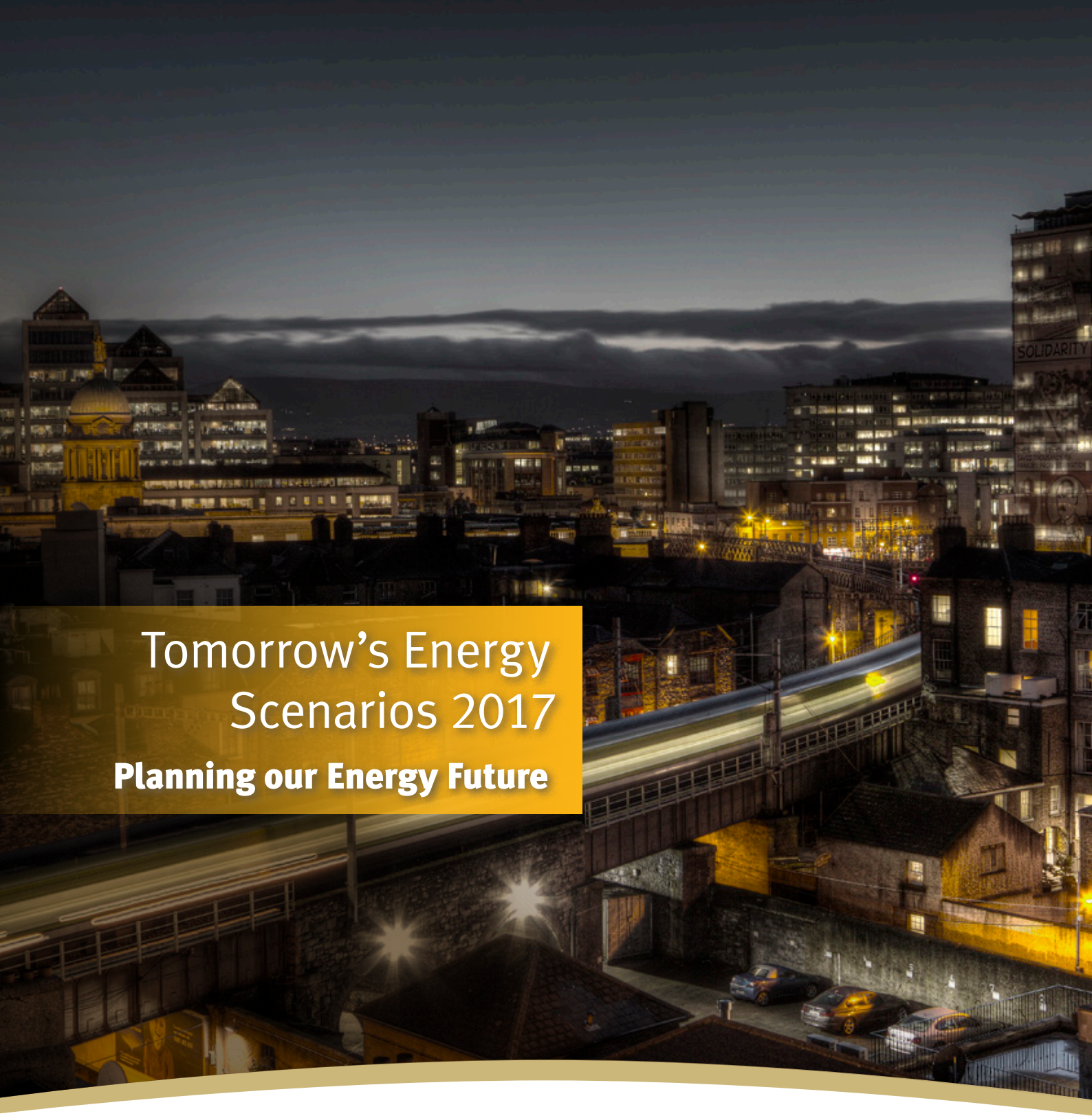
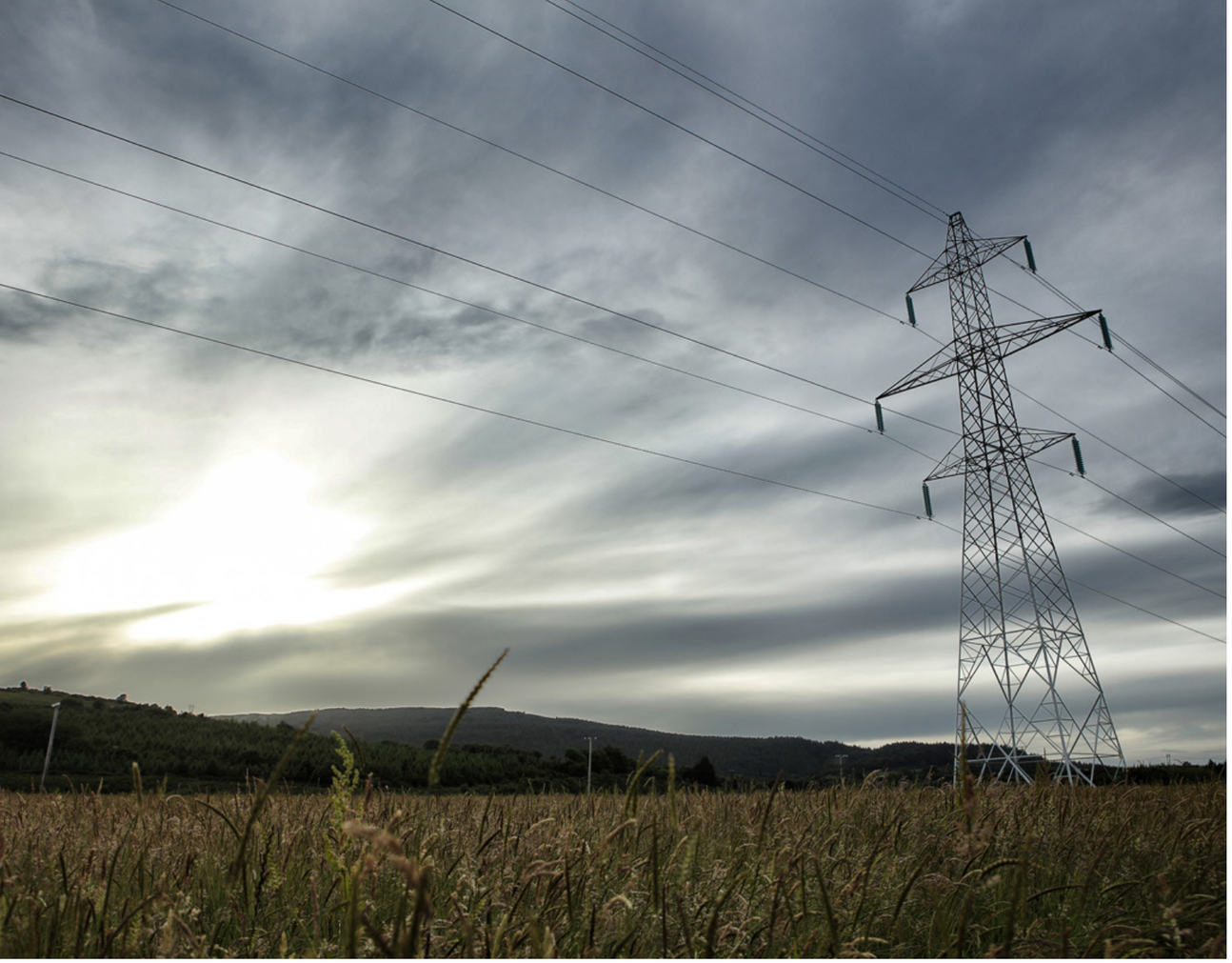


Tomorrow's Energy Scenarios 2017

Planning our Energy Future

EIRGRID

The current. The future.



Our scenarios at a glance

At EirGrid, one of our roles is to plan the development of the electricity transmission grid to meet the future needs of society. To do this we consider how electricity may be used and generated years from now - and what this means for the electricity grid of today. We call this **“Planning for our Energy Future”.**

The key to this process is considering the range of possible ways that energy usage may change in the future. We call this scenario planning. Scenario planning allows us to efficiently develop the grid taking account of the uncertainties associated with the future demand for electricity and the future location and technology used to generate electricity.

We are inviting contributions from the energy industry, members of the public and interested groups to help us plan for our energy future. To start this process, we have created four draft scenarios which are outlined on the opposite page. We developed these scenarios using our own experience and significant input received from government departments and agencies, energy research groups and industry representatives. In spring 2017 we will publish a consultation document which provides further details on our draft scenarios and on our scenario development process. The consultation will run for a six week period. We look forward to receiving contributions that help us finalise the scenarios we will use in our grid development process going forward.

Steady Evolution

Renewable electricity generation maintains a steady pace of growth. This is due to steady improvements in the economy, and in the technologies which generate electricity. New household technologies help to make electricity consumers more energy aware. This increases energy efficiency in homes and businesses. Over time, electricity consumers gradually begin to make greater use of electric vehicles and heat pumps. This means that, over time, electricity powers a larger proportion of transportation and heating.

Ireland’s 2030 emissions targets are met

Onshore wind generation increases to approximately 5,200 MW by 2030

New 700 MW interconnector to Europe is in place by 2025

Low Carbon Living

The economy enjoys high economic growth. This encourages the creation and rollout of new technologies for low carbon electricity generation. There is strong public demand to reduce greenhouse gas emissions. In addition to high carbon prices and incentives for renewables, this creates a high level of renewable generation on the grid. This clean energy then combines with improvements to broadband and transport to drive growth in large data centres.

Coal generation is repowered to Gas and Peat generation is repowered to Biomass by 2025

The total demand for electricity increases by 60% by 2030 compared to today

Data Centre connections reach 1900 MVA in 2030 - most of these are based in Dublin

Slow Change

The economy experiences very slow growth. Investment in new renewable generation is only in established, low risk technologies. Due to poor economic growth, new technologies that could increase the use of renewable generation at household and large scale levels are not adopted. Overall there is little change in the way electricity is generated when compared to today. Domestic consumers and commercial users are also avoiding risk and uncertainty. The only source of demand growth is the connection of new data centres but the level of investment slows down significantly after 2025.

Coal generation remains on the power system beyond 2030

The total demand for electricity increases by 28% by 2030 compared to today

Ireland’s 2030 emissions targets are missed

Consumer Action

A strong economy leads to high levels of consumer spending ability. The public want to reduce greenhouse gas emissions. Electricity consumers enthusiastically limit their energy use and generate their own energy. This results in a large number of community led energy projects and a rapid adoption of electric vehicles and heat pumps in the home.

There are almost 300,000 electric vehicles on the road by 2030

17% of residential houses are heated through heat pumps by 2030

Household batteries and Solar PV help to increase self-consumption of electricity

More detailed information on our draft scenarios is contained in our consultation document. This document will be published on our website in spring 2017. If you would like to be notified of the publication please let us know by sending an email to us at info@eirgrid.com

January 2017

EIRGRID

The Oval, 160 Shelbourne Road, Ballsbridge, Dublin D04 FW28 • Telephone: 01 677 1700 • www.eirgrid.com

Printed on recycled paper